Naunton Park Primary School

Science Policy

Last review date:
Next review date:
Awaiting Ratification

Intent

At Naunton Park Primary School, we promote high standards of science by equipping pupils with developing ideas and ways of working that enable them to make sense of the world in which they live through the specific disciplines of biology, chemistry and physics.

Linked to our "Naunton Park CHALLENGE Curriculum" we aim to help children know more and remember more in science, designed to centre upon key concepts and which allow children to make connection between larger ideas as they move throughout their science education.

We intend to inspire pupils to develop broad scientific knowledge and working scientifically skills by:

- Developing pupils' enjoyment and interest in science and an appreciation of its contribution to all aspects of everyday life;
- Preparing our children for life in an increasingly scientific and technological world;
- Fostering concern about, and active care for, our environment;
- Helping develop and extend our children's scientific concept of their world;
- Developing our children's understanding of the international and collaborative nature of science;
- Promoting a 'healthy lifestyle' in our pupils;
- Developing scientific enquiry skills which should include: observing over time; pattern seeking; identifying, classifying and grouping; comparative and fair testing (controlled investigations); and researching using secondary sources;
- Developing children's application of their mathematical knowledge to their understanding of science including collecting, presenting and analysing data; and
- Building up an extended specialist vocabulary.

A high-quality science education will help pupils gain a body of knowledge built up through experimental testing of ideas. Science is also methodology, a practical way of finding reliable answers to questions we may ask about the world around us. It should inspire pupils' curiosity to know, find out and ask questions about the world around them. Teaching should equip pupils to ask perceptive questions, think critically, weigh evidence, scrutinise findings and develop perspective and judgement.

We believe that a broad and balanced science education is the entitlement of all children, regardless of ethnic origin, gender, class, aptitude or disability.

National Curriculum

The National Curriculum (NC) for science aims to ensure that all pupils:

- develop **scientific knowledge and conceptual understanding** through the specific disciplines of biology, chemistry and physics
- develop understanding of the **nature, processes and methods of science** through different types of science enquiries that help them to answer scientific questions about the world around them

- are equipped with the scientific knowledge required to understand the **uses and implications** of science, today and for the future.

Early Years Foundation Stage (EYFS) Statutory Framework 2021

The Foundation Stage deliver science content through the 'Understanding of the World' strand of the EYFS curriculum (found on Science Progression and Working Scientifically Skills EYFS – Y6). This involves guiding children to make sense of their physical world and their community through opportunities to explore, observe and find out about people, places, technology and the environment. Children are given opportunities to plan and carry out their own scientific enquiry and investigations through structured play and child-initiated activities.

They are assessed according to the Development Matters Statements and Early Learning Goals. Pieces of learning are enquiry led providing children with opportunities to demonstrate and represent their learning in different ways.

Leading literature, continuous provision, trips and experiences will build a picture of their 'Understanding of the World' around them. Within EYFS, evidence is collated in floor books.

Implementation

At Naunton Park Primary School, Science is taught in blocks throughout the year, so that children achieve depth in their learning, with a sole focus on NC science content. The key knowledge, skills and vocabulary within each topic has been identified and consideration has been given to ensure progression across topics throughout each year group. Retrieval practice is at the heart of this, ensuring the prior learning is built on, and meaningful connections are made. In blocking out the subject and using the 30 min reading sessions every morning to impart knowledge we have achieved more science being taught than if it was delivered weekly across the year. Please see the Science overviews for how this is achieved.

The Science pieces of learning are centred on a leading question which when answered provides the teachers with evidence in what has been secure. The question is answered through Non-Fiction writing in their English lessons. Work leading up to answering this question also provides further evidence of depth of learning within the NC objectives.

Incidental Science also comes into our curriculum in other subject areas:

- Geography – terms 3 and 4. How environments have changed over time and issues with climate change over time. How people use their land and how this has changed over time.
- Forest school – understanding the world around them.
- PSHE – healthy living, looking after our body and life cycles.

Year Group	Y1	Y2	Y3	Y4	Y5	Y6
Term 2 5 weeks Science block	**Biology** Animals incl. Humans (Body and senses) Seasonal Change	**Biology** Animals incl. Humans	**Chemistry** Rocks and Soils	**Biology** Animals incl. Humans	**Chemistry** Properties and changes of Materials	**Biology** Evolution and inheritance
Terms 3 & 4 9 weeks	**Biology** Animals incl. Humans (Animals) Plants Seasonal Change	**Biology** Living things and their Habitats. Plants	**Biology** Animals incl. Humans Plants	**Biology** Living things and their Habitats. **Chemistry** States of matter	**Biology** Living things in their habitats Plants	**Biology** Living things and their habitats Animals Incl. humans
Term 6 6 weeks Science fair	**Chemistry** Everyday Materials **Biology** Seasonal Change	**Chemistry** Uses of everyday materials	**Physics** Light Forces and Magnets	**Physics** Electricity Sound	**Physics** Earth, Forces	**Physics** Electricity Light

Working Scientifically

All science planning is approached with a focus on "Working Scientifically" objectives, which are referred to directly on individual planning documents These are broken down into:

- Exploring
- Observations over time
- Pattern-seeking
- Identifying, classifying and grouping
- Fair testing
- Researching using secondary sources
- Technological
- Test and explanation

These broader areas are progressive and the age-related version of these with the appropriate vocabulary can be found on the Science Progression and Working Scientifically Progression Document EYFS – Y6.

Assessment

Never heard the word grids are completed prior to the unit commencing and recompleted at the end of the unit to show the children's progress in the **Key Science Vocabulary** (on Science Progression and Working Scientifically Progression Document EYFS – Y6). Other elicitation activities are used when appropriate.

For each piece of learning key questions are identified for each year group. When answered, in conjunction with the pupils' books and pupil voice we can make a judgement as to if they are secure within what has been taught. Insight in then used to record the attainment and progress of pupils as judged by the teacher.